DOCUMENT RESUME

ED 076 515 SP 006 388

AUTHOR	Sobel, Max A.; Maletsky, Evan M.
TITLE	Teaching Mathematics to the Slow Learner in the Inner City Schools.
INSTITUTION	Montclair State Coll., Upper Montclair, N.J.
PUB DATE	72
NOTE	5p.
EDRS PRICE	MF-$0.65 HC-$3.29
DESCRIPTORS	*Field Experience Programs; Inner City; Mathematics Education; *Preservice Education; *Secondary School Mathematics; *Slow Learners; Teaching Experience; *Urban Education
IDENTIFIERS	*Distinguished Achievement Award Entry

ABSTRACT

The 1972 Distinguished Achievement Award Entry from Montclair State College, Montclair, New Jersey focuses on the preparation of secondary mathematics teachers for slow learners in the inner city. Twenty students participated in the 3-week field experience program. The first week consisted of on-campus seminars which explored teaching methods appropriate for the motivation of slow learners and developed sample classroom teaching units and materials. The next 2-weeks were spent doing field work in five different inner-city schools. The participants were given the opportunity to observe, tutor, serve as teacher aides, and teach one or more full periods using the materials developed in the preceding week. The emphasis was placed on creative ways to motivate the slow learner through appropriate laboratory and experimental approaches. Evaluation of the program was implemented through questionnaires and interviews from participants, college faculty members, high school staff, and students. Results showed a favorable response to the program. Recommendations were made for the incorporation of this program into the regular preservice mathematics curriculum. (Author/BRB)

FILMED FROM BEST AVAILABLE COPY

ED 076515

35

TEACHING MATHEMATICS TO THE SLOW LEARNER IN THE INNER CITY SCHOOLS

Montclair State College
Montclair, NJ

U.S. DEPARTMENT OF HEALTH, EDUCATION & WELFARE
OFFICE OF EDUCATION
THIS DOCUMENT HAS BEEN REPRODUCED EXACTLY AS RECEIVED FROM THE PERSON OR ORGANIZATION ORIGINATING IT. POINTS OF VIEW OR OPINIONS STATED DO NOT NECESSARILY REPRESENT OFFICIAL OFFICE OF EDUCATION POSITION OR POLICY.

SP 006 388

ED 076515

35

MONTCLAIR STATE COLLEGE
FOUNDED 1908
UPPER MONTCLAIR, NEW JERSEY
07043

OFFICE OF THE PRESIDENT

November 15, 1972

Mr. Walter J. Mars, Associate Director
American Association of Colleges for
Teacher Education
One Dupont Circle
Washington, D. C. 20036

Dear Mr. Mars:

We are enclosing Montclair State College's entry in the 1973 Distinguished Achievement Awards competition.

Professors Max A. Sobel and Evan M. Maletsky, the faculty members responsible for the program "Teaching Mathematics to the Slow Learner in the Inner City Schools," have prepared the entry materials concerning the program, which has the whole-hearted support of the College.

Should any further information be necessary, please do not hesitate to contact my office.

Sincerely,

Thomas H. Richardson
President

Enclosures: Summary
Program Analysis
Abstract

35

TEACHING MATHERMATICS TO THE SLOW LEARNER IN THE INNER CITY SCHOOLS

Summary of Program:

Inasmuch as very few graduating teachers of secondary mathematics have had significant experience in teaching the slow learner, and recognizing the great need in this area of instruction, the mathematics department of Montclair State College (New Jersey) offered a three week field experience during an innovative period in January, 1972. Twenty students enrolled in the program and spent the first week in seminars on campus where they explored various teaching methods appropriate for motivating the slow learner, and also developed sample teaching units and materials for use in the classroom. They then spent most of the next two weeks in five different inner city schools on a full-time basis. Here they were given the opportunity to observe, tutor, serve as teacher aides, and to teach one or more full periods using the materials developed the preceding week. Emphasis was given to creative ways to motivate the slow learner through the use of appropriate laboratory and experimental approaches.

Students, college staff, and local high school staff were all unanimous in their praise of the program. Not only were the college students of significant assistance during their period of visitation, but they also helped the in-service teachers of the local schools to develop a renewed interest in searching for ways to meet the needs of the slow learner. The enthusiastic reception of the program has led the college to offer a similar course for a different group of students during the 1973 winter session. In addition, ways are being explored to incorporate various features of this program into the regular mathematics methods courses offered to all prospective teachers of this subject.

TEACHING MATHEMATICS TO THE SLOW LEARNER IN THE INNER CITY SCHOOLS

Very few of our graduating teachers of secondary mathematics have had more than passing attention focused on the task of teaching the slow learner. Furthermore their student teaching experiences tend to involve teaching mathematics to average and above average students in selected suburban communities. On the other hand, secondary schools have been eager to identify prospective teachers who are willing to specialize in this task of providing for the less able student. This is especially true for our city schools with special problems in this area.

The traditional three credit methods course does not provide sufficient time to adequately explore the problem of teaching mathematics to the slow learner. As a result, the Montclair State College mathematics department decided to offer a special course with the title stated above. This course was offered during a three week innovative period that the college scheduled during January, 1972. Twenty students enrolled in the course on a full-time basis for three semester hours of credit under the guidance of two experienced staff members, Dr. Max A. Sobel and Dr. Evan Maletsky. Both instructors have had wide experience in preparing materials for and working with slow learners in mathematics.

The objectives of the course, stated in terms of student activities, were as follows:

To review appropriate teaching procedures for slow learners.

To develop short units of work on significant mathematical topics.

To explore available curricula and text materials, as well as recommendations of various professional organizations concerning the mathematics program for slow learners.

To examine suitable audio-visual materials in mathematics.

To observe slow learners in mathematics classes in city schools.

To teach mathematics to slow learners on an individualized as well as on a group basis.

The first week of the program consisted of seminars held on campus, during which time such topics as the following were discussed:

Basic characteristics and needs of the slow learner.
Techniques of motivation.
Laboratory and discovery approaches.
Use of audio-visual aids.
Examination of available resource materials.

During this first week, each student prepared sample teaching units and materials for possible use in the classroom. These were discussed in groups, and with the instructors concerned. Students were guided to prepare non-traditional materials that could serve to suitably motivate the slow learner. For example, one sample unit introduced the students to the computer language of BASIC. Others involved such topics as laboratory units in experimental probability and statistics. In addition, during this first week, students were sent out in groups of four to various city schools as a means of orientation. Here they met with the appropriate department chairmen who acquainted them with their local problems and indicated the ways in which these college students could be of service to their staff. All of these department chairmen had been contacted by the course instructors and were eager to assist the college in providing opportunities for these students to work with slow learners in their mathematics classes.

During the next week and a half of this innovative course, the college students were sent out to remain on a full-time basis in five different city schools. They were given opportunities to participate in a variety of activities such as obervation, tutoring, and serving as teacher aides. In addition, each student had an opportunity to teach at least one or more full periods of classes of slow learners, using the materials and plans that had been developed during the first week of seminars on campus. During this period of time, both staff members visited each of the schools involved, and conferred both with the students and with the local staff as well. Finally, the last three days of the course were devoted to discussion and evaluation of experiences, with further suggestions offered by the instructors in the art of teaching the slow learner.

Each of the two instructors for this course received two semester hours of credit, counted towards their spring semester load. This course was one of five innovative

courses offered by the department, and involvement by both students and staff was entirely on a voluntary basis. Because of the overwhelming and enthusiastic reception received by this course, it is currently being planned for repetition during the innovative winter session of January, 1973.

Evaluation of this particular course can only be on a subjective basis. However, students, college staff, and local high school staff were all unanimous in their praise of the program. The local schools involved all agreed that our college students were of significant assistance during their period of visitation, and, furthermore, helped the local staff in a renewal of their interest in searching for ways to meet the needs of the slow learner. Indeed, this stimulation of interest on the part of the high school staff was cited by all as one of the most significant outcomes of the entire program.

The two college staff members involved were able to offer a course open to volunteers only, and found the student audience to be enthusiastic and receptive to all suggestions. Many of the students continued to visit these schools and work with their slow learners long after the program terminated. Finally, the 20 college students who participated were unanimous in their praise of the program and in their recommendation that a similar program be repeated or implemented as part of the regular college offerings. Perhaps their reactions can best be summarized by the following quotes taken directly from their final evaluation papers:

> "It allowed me to remove some fears I had about inner city students. They were not little monsters waiting to drive each teacher up a wall."

> "This innovative course was everything any course should be---informative, exciting, and an experience."

> "I think this was the greatest experience I had since I've been in college."

There is no doubt but that this innovative course has contributed to the improvement of teacher education for our mathematics majors. This particular group of 20 students terminated the program with a desire to student teach in city schools,

and to search for teaching positions that would involve them with slow learners. Their enthusiastic endorsement of the course has encouraged the department to repeat the program next year, thus serving another group of students. At the same time efforts are being made to incorporate various features of this program into the regular mathematics methods courses offered to all prospective teachers of this subject. Finally, it must again be noted that a significant fringe benefit of the program was the transfer of enthusiasm to the in-service teachers of the city schools involved.